

BARDACH, Janusz; JANNISZEWSKA, Waleria; PARTYKA, Wieslawa;
TALCZAK, Jadwiga

Activities of the center for the treatment of developmental
defects of the face during the period of Jan. 1, 1962 --
July 1, 1964. Czas. stomat. 18 no.8/9:927-930 Ag-S '65.

1. Z Osrodka Leczenia Wad Rozwojowych Twarzy przy Klinice
Chirurgii Szczekowo-Twarzowej AM w Lodzi (Kierownik: prof.
dr. med. J. Bardach).

TRONCZYNSKA, Jadwiga; PERCZYNSKA-PARTYKA, Wieslawa

Indications for the use of a palato-pharyngeal flap in the surgical correction of cleft palate. Czas. stomat. 18 no.8/9: 947-950 Ag-S '65.

1. Z Osrodka Leczenia Wad Rozwojowych Twarzy przy Klinice Chirurgii Szczekowo-Twarzowej AM w Lodzi (Kierownik: prof. dr. med. J. Bardach).

TRONCZYNSKA, Jadwiga.

On work of the phoniatriy clinic in Lodz. Cesk. otolaryng. 11 no.1:
61-63 F '62.

(PHONETICS hosp & clinics)

TRONCZYNSKA, Jadwiga

Unusual case of systemic disease of the cartilages. Otolaryngologia 12 no.1: 89-92 1958.

1. Z Kliniki Otolaryngologicznej A. M. w Łodzi Kierownik: prof. dr med. A. Radziński.

(EAR, EXTERNAL, dis.

edema as manifest. of systemic inflamm. of cartilages, case report (Pol))

(CARTILAGE, dis.

systemic inflamm. manifested by edema of ear, case report (Pol))

(EDEMA. etiol. & pathogen.

ear, as manifest. of systemic inflamm. of cartilages, case report (Pol))

TRONCZYNSKI, M.

GLOKSIN, W.; REDLICH, F.; TRONCZYNSKI, M.

Treatment of diphtheria with aureomycin. *Pediat. polska* 28 no.7:723-727 July 1953. (CIML 25:4)

1. Of the Second Pediatric Clinic (Head--Prof. F. Redlich, M.D.)
of Lodz Medical Academy.

TRONCZYNSKA, Jadwiga; SOBOTKOWSKI, Kazimierz

Anatomical conditions for the development of esophageal voice after laryngectomy. Otolaryng. Pol. 19 no.2:215-220 '65.

1. Z Kliniki Otolaryngologicznej Akademii Medycznej w Lodzi (Kierownik: prof. dr. med. A. Radziminski) i z Zakladu Radiologii Akademii Medycznej w Lodzi (p.o. Kierownika: dr. med. K. Sobotkowski).

TRONCZYNSKA, Jadwiga

Comparative studies of bone conduction audiometry. Otolaryng.
Pol. 19 no.1:77-82 '65.

1. Z Kliniki Otolaryngologicznej Akademii Medycznej w Lodzi
(Kierownik: prof. dr. A. Radziminski).

TRONCZYNSKI, M.; STRUMILLO, B.

Attempted therapy of malnutrition in infants and children with the preparation hepafort. *Pediat. polska* 31 no.4:435-437 Apr 56.

1. Z II Kliniki Chorob Dzieciacych A.M. w Lodzi Kierownik: prof. dr. med. Fr. Redlich, Lodz, Armii Czerwonej 15.

(LIVER EXTRACTS, therapeutic use,
inf. nutrition disord. & malnutrition in child, liver
hemopoietic factor with vitamin B12 (Pol))

(INFANT NUTRITION DISORDERS, therapy,
liver hemopoietic factor with vitamin B12 (Pol))

(DEFICIENCY DISEASES, in infant and child,
ther., liver hemopoietic factor with vitamin B12 (Pol))

(VITAMIN B12, therapeutic use
inf. nutrition disord. & malnutrition in child., with
liver hemopoietic factor (Pol))

TRONER, M.
N. KURNAKOV, DAN. v. 51, n. 3, 1946, p. 217-220

PEKKER, Yakov Iosifovich; TRONEV, K.P., red.; MATSUK, R.V., red.
izd-va; MURASHOVA, V.A., tekhn. red.

[Socialist transformation of agriculture] Sotsialisticheskoe
preobrazovanie sel'skogo khoziaistva. Moskva, Gos.izd-vo
"Vysshaya shkola," 1962. 93 p. (MIRA 16:2)
(Agriculture, Cooperative) (Collective farms)

KHUDOKORMOV, Georgiy Nikolayevich; TRONEV, K.P., red.; MATSUK, R.V.,
red. izd-va; GOROKHOVA, S.S., tekhn. red.

[Commodity production and the law of value under socialism]
Tovarnoe proizvodstvo i zakon stoimosti pri sotsializme.
Moskva, Gos. izd-vo "Vysshaya shkola," 1962. 110 p.
(MIRA 15:3)

(Russia—Manufactures) (Value)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001756720012-0

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001756720012-0"

BC

Absorption of hydrogen by palladium-black under high pressures. V. V. IPATIEV, jun., and V. G. TRONKY (J. Gen. Chem. Russ., 1933, 3, 78-86).
—The absorption-pressure isotherms for H_2 in Pd, at 25°, 100°, 150°, 200°, and 300°, and 0-27 atm., tend to become flatter with increasing temp.; at the same time the region of abrupt rise in absorptive power becomes displaced in the direction of greater pressure.
R. T.

ca

The theory of the oxidation of chromium oxide with air oxygen under pressure and in aqueous solutions. V. V. Ipat'ev, Jr., and V. G. Tronev. *J. Appl. Chem.* (U. S. S. R.) 6, 833-8 (1933).—The expts. were made with $\text{Cr}(\text{OH})_3$ at temps. from 150° to 300° and pressures up to 100 atm., the duration being 24 hrs. and more. With $\text{Cr}(\text{OH})_3$ and water the oxidation reaction proceeds at a fair rate. Expts. were made in the presence of the following salts: K_2CO_3 , Na_2CO_3 , satd. soln. of NaHCO_3 , Na_2HPO_4 , Na_2HPO_4 , Na_2SO_4 , and KCl . In soln. of Na_2CO_3 and Na_2HPO_4 , i. e., in solns. having an alk. reaction, the oxidation is complete, while in neutral or almost neutral solns. oxidation proceeds up to pH 7. The oxidation in the presence of mineral acids such as H_2SO_4 , H_3PO_4 , HCl , H_2CrO_4 , and CH_3COOH requires a concn. of the H ion not in excess of 0.001. The above oxidation reactions are of the reversible type. The pH detns. were made with a glass electrode. A. A. Bichtling

ASTM-S-4 METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS		PROCESSING AND PROPERTIES INDEX	
<p>✓</p> <p>The mechanism of the removal of noble metals from solutions of their salts by hydrogen under pressure. I. The removal of palladium from solutions of palladium chloride. V. V. Ipatoff, Jr., and V. G. Ligues. <i>Compt. rend. acad. sci. P. R. S. S. U.</i> 1927 401 (German 624 6) (1934). Pd is completely pptd. as Pd black from solns. of $PdCl_2$ by H_2 at atm. pressure, and the rate of pptn. increases with pressure under conditions of const. stirring. The velocity consts. agree well with those calcd. from the equation of autocatalytic unimol. reactions. HCl in the soln. retards the pptn. but metallic chlorides have no effect. The presence of oxidizing agents retards the pptn. and must be reduced before the Pd comes out. II. The removal of the noble metals from solutions of $H.PtCl_4$, $H.IrCl_4$, $Na.IrCl_4$ and $Na.RhCl_4$. <i>Ibid.</i> 627 9 (in German 629 2).—Pt black is pptd. from its soln. much more slowly than Pd. It could be completely pptd. and increase in pressure, faster stirring and introduction of a little Pt black as catalyst increased the rate. Under the same conditions Ir is reduced at room temp. to the trivalent form. At 50° and 100 atm. the reduction was complete in 2 days. It is only pptd. as metal at a temp. above 50°. Rh is pptd. more slowly than Pd, but faster than Pt or Ir from solns. of its chlorides. C. E. P. Jeffreys</p>		<p>✓</p>	
<p>ASME S.L.A. METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>100000 00</p>		<p>100000 00</p>	

M

On the Mechanism of Displacement of Noble Metals from Solutions of Their Salts by Hydrogen under Pressure. II.—Displacement of Noble Metals from Solutions of H_2PtCl_6 , H_2IrCl_6 , Na_2IrCl_6 , and Na_2RhCl_6 . V. V. Ipatiev and V. G. Trupay (*Doklady Akademii Nauk S.S.S.R. (Compt. rend. Acad. Sci. U.R.S.S.)*, 1935, 1, 627-630 (in Russian), 629-632 (in German)).—S. G.

ACCORDING TO METALLURGICAL LITERATURE CLASSIFICATION

CA 7

COMMON ELEMENTS

1ST AND 2ND GROUPS

PROCESSING AND EXPERIMENTAL DATA

THE SEPARATION OF THE PLATINUM METALS BY HYDROGEN UNDER PRESSURE. V. V. Ipatiev, Jr., and V. G. Tikhonov. *Compt. rend. acad. sci. U. R. S. S. 2, 20-22 (in German 33-35) (1935); cf. C. A. 29, 4638a.* -- Certain binary mixts. of the salts of Pt metals can be analytically sepd. by H₂ under pressure if the soln. is rapidly stirred. PdCl₂ was immediately pptd. by H from a CuCl₂ soln. but was pptd. from FeCl₂ soln. only after all the Fe was reduced to FeCl₂. A 0.01 N PdCl₂ and 0.1 N H₂PtCl₆ in rather strong HCl soln. at 25° was treated with H at 30 atm. The Pt was reduced to H₂PtCl₆ and the Pd pptd. in 1 hr. PdCl₂ (0.01 N) was pptd. from 0.1 N Na₂IrCl₆ by H at atm. pressure in 60 min. and from Na₂IrCl₆ in 15 min. Na₂RhCl₆ (0.1 N) was pptd. in 60 min. from 0.1 N Na₂IrCl₆ by H at atm. pressure, and in 1 hr. from Na₂IrCl₆. PdCl₂ and Na₂RhCl₆ could not be sepd. These reactions are discussed from the standpoint of oxidation-reduction potential.

John E. Milbery

ASD-5L3 METALLURGICAL LITERATURE CLASSIFICATION

RECORD NUMBER

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

BC

Displacement of noble metals from solutions of their salts by hydrogen at atmospheric or increased pressure. Displacement of (I) Pd from solutions of PdCl_2 , (II) Pt from solutions of H_2PtCl_6 . V. V. IPATIN and V. G. TRONEV (J. Gen. Chem. Russ., 1935, 5, 643-653; 653-660). I. The reaction $\text{PdCl}_2 + \text{H}_2 \rightarrow \text{Pd} + 2\text{HCl}$ is of an autocatalytic nature, and proceeds at considerable velocity at room temp. and atm. pressure; its velocity is determined by the rate of diffusion of H_2 into the solution. The reaction is retarded by increasing the $[\text{HCl}]$ or by adding oxidizing agents, but is unaffected by ions of less noble metals, which are displaced only after complete displacement of Pd.

II. The reaction consists of the steps $\text{H}_2\text{PtCl}_6 \rightarrow \text{H}_2\text{PtCl}_4 \rightarrow \text{Pt}$; the above considerations are also applicable to it.

R. T.

1ST AND 2ND CROSS		PROCESSES AND PROPERTIES INDEX		100 AND 4TH CROSS	
<p><i>Pl</i></p> <p>Displacement of platinum metals from solutions of their salts by hydrogen at high pressures. V. G. TRONKOV (Bull. Acad. Sci. U.R.S.S., 1937, 333-302).—The reaction of pptn. of Pt metals from their salts by H_2 under pressure, with energetic stirring, is of the autocatalytic type, the displaced metals acting as catalysts. The reaction is represented: $H_2.MCl_6 \rightleftharpoons MCl_4 + 2H^+ + MCl_6^{2-}$; $M^{III} + 6Cl^-$; $H_2.MCl_6 \rightleftharpoons MCl_4 + 2H^+ + MCl_6^{2-}$; $M^{III} + 4Cl^-$; $M^{IV} + H_2 \rightarrow M^{II} + 2H^+$; $M^{II} + H_2 \rightarrow M + 2H^+$ ($M = Pt, Ir, Pd, Rh$). Pt can be pptd. from a solution of H_2PtCl_6 and $PdCl_2$ in $6N.HCl$ by the action of H_2 at $25^\circ/30$ atm. (100 min.). Rh^{III} or Pd^{II} can similarly be separated from Ir^{IV} (1 hr. at $25^\circ/1$ atm.). Separation of Rh^{III} and Pd^{II} cannot be effected by this method, owing to the simultaneous pptn. of the metals.</p> <p style="text-align: right;">R. T.</p>					
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>					
EXON1 STIRING		EXON1 EXON1		EXON1 EXON1	
100 AND 4TH CROSS		100 AND 4TH CROSS		100 AND 4TH CROSS	
100 AND 4TH CROSS		100 AND 4TH CROSS		100 AND 4TH CROSS	

BC A-1

Solubility of noble metals at high pressures.
 I. Dissolution of platinum metals in hydrochloric acid under air pressure. V. G. TRONEV.
 (Zhurn. tekh. Akad. Sci. U.R.S.S., 1937, 18, 555-558).--The view that the dissolution of Pt in HCl in the presence of air without evolution of H_2 involves the reactions $2HCl + O \rightleftharpoons H_2O + Cl_2$; $Pt + Cl_2 + 2HCl \rightarrow H_2PtCl_6$, receives qual. support from the fact that the rate of dissolution increases as the air pressure, [HCl], and temp. increase. Both Pt and Au can be dissolved in HCl in presence of H_2O_2 ; Ir and Rh dissolve to some extent after treatment for several hr. in an autoclave under pressure.
 R. C. M.

ATA-55A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND GROUPTS

PROCESSES AND PROPERTIES INDEX

2

ca

The solubility of noble metals under high pressure. II.
 The solution of gold in cyanides under air pressure. V.
 G. Troncy and S. M. Bondin. *Compt. rend. acad. sci.*
 U. R. S. S. 16, 281-4 (1937) (in German); cf. C. A. 31,
 8110'. —Powd. Au was dissolved in 1% KCN soln. under
 various pressures of N₂ and air. With N₂, increased pres-
 sure had very little effect; with air, at 18°, the velocity of
 soln. increased up to 50 atm. (41% of a 1-g. sample in
 100 cc. KCN in 1 hr.) and then became const. This opt.
 pressure corresponds to approx. 225 mg. O₂ dissolved in
 100 cc. of soln. At 50° the opt. pressure had not been
 reached at 70 atm., under which conditions 95% of a 1-g.
 sample dissolved in 1 hr. III. The effect of the tempera-
 ture and of the potassium cyanide concentration on the
 velocity of solution of gold under high air pressure. *Ibid.*
 313-16 (1937) (in German). —Under 50 atm. pressure the
 rate of soln. of Au in 1% KCN soln. was still increasing
 at 90°, the highest temp. used. The rate of soln. at 18°
 under 50 atm. pressure was a max. for 0.20% KCN soln.
 T. H. Dunkelberger

COMMON ELEMENTS

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SECTION 100

13C

A-1

Displacement of gold from chloride solutions by hydrogen at high pressures. V. G. Tsonev. (Compt. rend. Acad. Sci. U.R.S.S., 1937, 16, 317—320).—H₂ at 1 atm. reduces H₂AuCl₄ (0.02N) to Au⁺ at first, and a ppt. of Au appears only after an induction period of about 1 hr. In presence of an excess of NaCl this is increased to several hr. Complete pptn. of the Au is not possible. At 100 atm. without stirring Au is pptd. very slowly, but the rate of reaction increases rapidly with increasing speed of stirring, whilst at a given speed of stirring the rate of reaction increases with increasing pressure. Excess of HCl causes a decrease in the rate of reaction. With rising temp. the rate of reaction increases only slightly from 18° to 50°, but much rapidly from 50° to 75°.

F. J. G.

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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d-1

Action of hydrochloric acid on noble metals under high pressures of air. V. G. THOMAS and S. M. BORDEN (Ann. Soc. Platin., 1938, No. 15, 113-123).—The rate of dissolution of Pt in HCl rises with increasing [HCl], temp., pressure, and surface of contact; it is considerable for Pt-black in 6N-HCl at 150°/50 atm. Under analogous conditions Au, Pd, Rh, and Ir undergo dissolution in presence of H_2O_2 . R. T.

ASTM 3.4 METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS										COMMON VARIABLES									
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
CA										2									
<p>Oxidation of copper sulfide and transference of copper into aqueous solution under air pressure. O. E. Zvyagin-tsev and V. G. Tronev. <i>Compt. rend. acad. sci. U. R. S. S.</i> 23, 537-40 (1939) (in English).—It is known that the soln. of Cu sulfides in water fluctuates within narrow limits of the order of 10^{-12} to 10^{-6} mols. per l. at normal temp. and pressure. This investigation gives preliminary data on the effect of high air pressure (up to 100 atm.) and temp. (up to 150°) on oxidation and soln. in water. The effect of partial pressure of oxygen on the soln. of Cu from CuS in water was detd. by using a weighed portion of CuS from a CuSO₄ soln. with H₂S and dried at 100° to const. weight. Under partial pressures of O in the system varying from 0.3 to 46 atm. the percentage Cu dissolved ranged from 6.0 to 87.0%. Expts. on the effect of temp. on the soln. of Cu from CuS in distd. water under air pressure show that first of all the CuS oxidation velocity and the passing of Cu into soln. increase as the temp. is raised until an optimum is reached, above which soln. decreases more or less pronouncedly depending on the initial weighed portion of CuS. This may be explained in terms of acceleration and strengthening of hydrolysis of the sulfate product. These data lead to the following conclusions: (1) CuS can be dissolved in distd. water in a few hrs. under air pressure at temps. from 100° to 200°. (2) The velocity with which Cu passes into aq. soln. is proportional to the partial pressure of O in the gaseous phase. (3) As a result of hydrolysis of the CuSO₄, which forms from the oxidation of CuS, basic copper sulfate, CuSO₄·2Cu(OH)₂, remains undissolved in water. Its quantity depends upon the temp.</p> <p style="text-align: right;">R. K. Carleton</p>																			
ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									

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PROCESSES AND PROPERTIES INDEX																																																			
<p>CA</p>																										<p>Oxidation of zinc sulfide and transference of zinc into aqueous or alkali solution under air pressure. V. G. Tronev and S. M. Boudin. <i>Compt. rend. acad. sci. U. R. S. S. 23, 741-3 (1939) (in English)</i>.—Since no data were available in the literature, this investigation was undertaken to det. the soly. of ZnS in water, dil. acids and alkalis at temps. above 100° and at high pressures. Artificial ZnS, prepd. by the method of Vanino by pptg. it with (NH₄)₂S from a soln. of Zn(OAc)₂ and dried at 100° served as an initial material. From preliminary data it was found that high pressure of air (up to 85 atm.) compared with atm. pressure increases the transference of Zn into aq. soln. by four times, also that further increase in the temp. from 100° to 200° increases the transference of Zn into soln. by three times. The dissolving of Zn in an alk. soln. was considerably increased at air pressure of 80 atm. and at 150°. It is concluded that: (1) The insignificant soln. of ZnS in water or alk. solns. under ordinary conditions of temp. and pressure is considerably increased at higher pressures of air. Thus, it is possible to dissolve ZnS completely in a 4N soln. of NaOH at a temp. of 150° and air pressure of 100 atm. during a few hrs. (2) The process of dissolving ZnS in alkali is accompanied by its oxidation to ZnSO₄ with a subsequent formation of zincate.</p>																									
																										<p>R. K. Carleton</p>																									
<p>ASB-51A METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			
<p>1ST AND 2ND CROSSL</p>																										<p>3RD AND 4TH CROSSL</p>																									

TRONEV, V. G.

PA 30T9

USSR/Chemical Industry
Pressure, High

Dec 1946

"High Pressure in Inorganic Chemistry," V. G. Tronev,
Doctor of Chemistry, 3 pp

"Nauka i Zhizn'" No 11/12

High pressure apparatus is in wide use in power and chemical industries of the USSR. Therefore, the new Five-Year Plan calls for the development of the production of high pressure compressor and chemical apparatuses. The article shows the role of high pressure in the development of the Five-Year Plan and considers some of the attainments of science in this field.

30T9

1ST AND 2ND CROSS										2ND AND 3RD CROSS									
PROCESSES AND PROPERTIES MOST																			
<div style="position: relative;"> <div style="position: absolute; top: 10px; left: 10px; font-size: 2em;">Ca</div> <div style="position: absolute; top: 10px; right: 10px; font-size: 2em;">2</div> <div style="position: absolute; top: 200px; left: 100px;"> <p>Decomposition of cassiterite in alkaline solutions. V. G. Tronev and A. L. Khrenova. <i>Compt. rend. acad. sci. U.R.S.S.</i> 34, 611-13(1948) (in French).—The Sn in 1-2 g. samples can be 99.9% dissolved in a const. vol. of 40 ml. of 50% KOH when heated in an autoclave at 300° for 3 hrs. at 90-100 atm. When larger samples are used (3-8 g.) under the same conditions, a satd. soln. is obtained so that a smaller % of the Sn goes into soln. and a solid phase is formed. With NaOH, large quantities of colorless crystals were obtained corresponding approx. to the compds. $\text{Na}_2\text{Sn}(\text{OH})_6 \cdot \text{H}_2\text{O}$ and $\text{Na}_2\text{SnO}_3 \cdot 3\text{H}_2\text{O}$. By use of KOH in the presence of CO_2, a form of H_2SnO_3 which was sol. in cold HCl and another variety which was insol. in alkali and strong acid were obtained in addn. to water-sol. stannates of K.</p> <p style="text-align: right;">Paul E. Clark</p> </div> </div>																			
ABSTRACTED LITERATURE CLASSIFICATION																			
FROM SYNDICATE										FROM SYNDICATE									
TOTALS AND SUB TOTALS										TOTALS AND SUB TOTALS									

B

Solution of Cassiterite in Alkaline Solutions. V. G. Tronev and A. L. Chrenova. *Reports of the Academy of Sciences of U.S.S.R.*, v. 64, no. 7, 1946, p. 615-617. (In Russian.)

Artificially prepared tin oxide was successfully dissolved in alkaline solution in an autoclave at 200°-300°C., although the literature reports no success in attempts to dissolve cassiterite. The results reported may have application to recovery of tin from ore.

TRONEV, V.G., doktor khimicheskikh nauk.

Chemistry in the high pressure and high temperature steam technology. Nauka i zhizn' no.8:2-4 Ag '47. (MLRA 9:5)
(Boilers)

CA

The reduction of palladium and platinum by hydrogen under pressure. V. G. Tronev and V. N. Chulkov. *Doklady Akad. Nauk S.S.S.R.* 57, 269-70(1947); *Chem. Zentr.* (Russian Zone Ed.) 1948, I, 1287. — Anhyd. crystals of a no. of Pt and Pd compounds were treated with H_2 under pressure in an autoclave. Several hrs. treatment at 100° atm. H_2 at room temp. produced no reduction except in the case of 1 palladamine. Pt and Pd black were then added as catalysts and the expts. repeated. The results support the assumption that an induction period is necessary for the reduction reaction. This dry reduction proceeded differently from the usual reduction with nascent H in aq. soln. (reported by others). $(NH_4)_2PtCl_6$ was rapidly and explosively reduced. $KPt(NO_3)_4$ which is not reduced at ordinary temp. in aq. soln., was reduced still more rapidly. $(NH_4)_2PtCl_6$ was not reduced in the course of a day, although in aq. soln. it is reduced in 20-30 min. $(NH_4)_2PtCl_6$ was still unreduced after 1 hr. $(NH_4)_2PtCl_6$ and $(NH_4)_2PdCl_6$ were reduced within 1 hr. The heat of formation of these complexes can be ded. by their "combustion" in the H bomb. H_2 can be used for the refining of Pt and Pd in place of the roasting of the complexes.

M. G. Moore

6

C.A

Reduction of silver from nitrate and ammoniate solutions with hydrogen under pressure. *V. G. Tronev and S. M. Bondin. Izvest. Sektora Plating i Druzhba Blagorod. Metal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.S.R. No. 22, 187 (1918).*—The reduction of Ag^+ was studied at H pressure of 100 atm. and 25–200°. Under no condition was all of the Ag^+ reduced. Apparently, the reduced Ag redissolved in the HNO_3 which was formed. In addition to HNO_3 , there formed also nitrites, which decomposed into N oxides. All of the Ag^+ could be reduced if the N oxides were removed from the reaction area. From solns. of $AgCl$ in NH_4OH , at temps. of 100° or higher and H pressure of 10 atm. or higher, within 1 hr. 80–100% of the Ag^+ was reduced to metal. M. Hirsch

6

C. A.

Reduction of gold from chloride and cyanide solutions with hydrogen under pressure. V. G. Tronev and S. M. Bondin. *Izv. Akad. Nauk S.S.S.R. Ser. Khim. i Metall.*, 1961, 201 (1961).—Pptn. of Au from HAuCl_4 soln. was studied at 0–100° and up to 100 atm. of H_2 . At 50 atm. of H_2 , reduction of Au^{3+} up to 60° was insignificant. Above that temp. reduction was rapid. Under 100 atm. of H_2 at 25° the e.m.f. decreased slowly for 1 hr. During this period very little Au was found in the reaction vessel, but the amt. of AuCl_4^- increased. After 4 hrs. there was a sharp drop in the e.m.f. After this drop, almost all of the Au was pptd. At 75° the process was entirely similar except that the sharp drop in the e.m.f. occurred after 75–80 min. The pptn. of Au therefore occurred in 2 steps: first AuCl_4^- was reduced to AuCl_2^- and then AuCl_2^- to metallic Au. From its cyanide soln. Au was completely reduced within 2 hrs. at 50 atm. of H_2 and 175°. M. Hosh

TRONEV, V. G.

PA 55/49797

USSR/Physics
Hydrogen Bond
Reactions

Dec 48

Problem of the Thermodynamic Basis of the Trans-
effect Principle, V. G. Tronev, V. R. Chulkov,
Lab of High Pressures, Inst of Gen and Inorg Chem
Imeni N. S. Kurnakov, Acad Sci USSR, 4 pp

Dok Ak Nauk SSSR Vol LXIII, No 5

Collected data corroborates the thermodynamic basis
of the reaction in the internal sphere of complex
compounds, since hydrogen, before entering the
reaction, must somehow penetrate the inner sphere,
after which, as a result of its strong trans-effect,
55/49797

USSR/Physics (Contd)

55/49797

all substituents are rapidly replaced by it as
free central atoms are formed. Submitted by Acad
I. I. Chernyayev 20 Oct 48.

55/49797

0

CA

Equilibria in solutions of cobalt and nickel ammoniates at elevated pressure and temperature. V. G. Tronev, S. M. Bondin, and A. L. Khrenova. *Izv. Akad. Nauk SSSR i Drugikh Blagorod. Metal., Inst. Obshchey i Neorg. Khim.*

Abstr. Nauk SSSR No. 23, 110-22(1970), of C.A. 45, 533d. The soly. of Co and Ni powders in 25% NH_4OH sat'd. with NH_4Cl under 50 atm. of air increased up to approx. 150°, then dropped. The oxides behaved similarly. The soly. as above with H_2 in place of air was lower but analogous. This behavior is explained by formation of $\text{Co}(\text{NH}_3)_6\text{Cl}_2$ and $\text{Co}(\text{NH}_3)_4\text{Cl}_2$ under air and $\text{Co}(\text{NH}_3)_6\text{Cl}_2$ and $\text{Ni}(\text{NH}_3)_6\text{Cl}_2$ under H_2 . The cobalt hexammines are sparingly sol. in NH_4OH soln. of NH_4Cl . The decrease in soly. above 150° is apparently caused by an increased rate of hydrolysis. The e.m.f. of the systems was det'd. at 175° and 200° and 40 atm. of H_2 . The data indicated the equilibria $\text{Co} + 4\text{NH}_3 + 2\text{NH}_4\text{Cl} \rightleftharpoons \text{Co}(\text{NH}_3)_4\text{Cl}_2 + 2\text{H}_2$, and $2\text{Co}(\text{OH})_2 + 4\text{NH}_3 + 6\text{NH}_4\text{Cl} \rightleftharpoons 2\text{Co}(\text{NH}_3)_6\text{Cl}_2 + 6\text{H}_2\text{O}$. The formation of these complexes when Co dissolves in ammoniacal soln. coupled with increased rate of hydrolysis at elevated temp. may complicate the leaching of Co and Ni from their oxides. This was tested on tech. samples. At 150° and 25 atm. with 25% NH_4OH the rates of leaching of Co and Ni were similar; they decreased with time. In the presence of NH_4Cl and $(\text{NH}_4)_2\text{CO}_3$ 61-87% of initial Ni dissolved and only 4-5% of Co. In the presence of $(\text{NH}_4)_2\text{CO}_3$ the amt. of Co in soln. increased considerably.

M. Hoesch

6

CA

Reduction of cobalt, nickel, and copper from complex compounds with hydrogen under pressure. *V. G. Tsvetkov, S. M. Bondin, and A. L. Khrenova. Izvest. Sektora Fiz. i Khim. Akad. Nauk S.S.S.R., No. 23, 123-31 (1949).*—
 $\text{Co}(\text{NH}_3)_6\text{SO}_4$, 4, $\text{Ni}(\text{NH}_3)_6\text{SO}_4$, 1.2, and $\text{Cu}(\text{NH}_3)_4\text{SO}_4$, 3 g were separately placed in 100 ml. of H_2O contg. 24-25% of free NH_3 at 20-200° and 50-75 atm. of H_2 . The solns. were vigorously stirred. The quantity of reduced metal in each of the solns. was detd. Up to 100° no metal appeared. At 125° all 3 metals were reduced but to a varying extent, Cu most, Co least. At 175° all of Cu and Ni was reduced and at 200° Co was reduced completely within 2 hrs. Heating $\text{Co}(\text{NH}_3)_6\text{Cl}_2$ under 50 atm. of H_2 gave complex results in which hydrolytic and reduction reactions occurred. Addn. of NH_4OH and NH_4Cl to purpureo salt heated at 200° under 50 atm. of H_2 arrested reduction and solubilized hydrolysis products. Attempts at selective pptn. of Co and Ni from their hexamine chlorides at elevated temps. and H_2 pressure were unsuccessful. M. Hosh

PA 234T16

TRONEV, V. G.

USSR/Chemistry - Rhenium Compounds 1 Sep 52

"The Use of I. I. Chernyayev's Principle of Transinfluence in the Synthesis of Complex Compounds of Rhenium in Nonaqueous Solutions,"
V. G. Tronev, S. M. Bondin

"Dok Ak Nauk SSSR," Vol 86, No 1, pp 87-90

$(\text{NH}_4)_2\text{ReCl}_4$, prepd by reducing $(\text{NH}_4)_2\text{ReCl}_6$, was treated with pyridine in an acetone soln. Two isomers of RePy_2Cl_2 resulted: the cis isomer, having a grayish-green color, and the trans isomer, having a light green color. Presented by Acad I. I. Chernyayev 28 Jun 52.

234T16

TR. NOV, V G

2

✓ Contribution of the Russian scientists to the chemistry of
rhentim-dymangaese. V. G. Troney. *zhim. K. J. J. J. J.*
Mienior, Akad. Nauk S.S.S.R. 18-27 (1954). --37 refer-
ences through 1951. G. M. Kosolapoff

V

USSR

Preparation of acid complex compounds of rhenium by
oxidation of perchlorates with hydrogen under pressure.

Don't know what
NH₄ReO₄ gave a...
KReO₄ gave...
green, K₂ReO₄ and yellow K₂ReO₄...
were hydrolyzed with... the filtrate was
pptd. as perchlorate with...
analyzed for Cl

TRONEV, V.G.

GRINBERG, A.A. (Leningrad); BABAYEVA, A.V. (Moscow); YATSIMIRSKIY, K.B. (Ivanovo); GOREMYKIN, V.I. (Moscow); BOLIV, G.B. (Moscow); FIAL-KOV, Ya.A. (Kiyev); YAKSHIN, M.M. (Moscow); KEDROV, B.M. (Moscow); GEL'MAN, A.D. (Moscow); FEDOROV, I.A. (Moscow); MAKSIMYUK, Ye.A. (Leningrad); VOL'KENSHTeyN, M.V. (Leningrad); ZHDANOV, G.S. (Moscow); PTITSYN, B.V. (Leningrad); ABLOV, A.V. (Kishinev); VOLSHTEYN, L.M. (Dnepropetrovsk); TROITSKAYA, A.D. (Kazan'); KLOCHKO, M.A. (Moscow); BABAYEVA, A.V.; TRONEV, V.G. (Moscow); RUBINSHTeyN, A.M. (Moscow); CHERNYAYEV, I.I.; GRINBERG, A.A.; TANANAYEV, I.V.

Explanation of the transeffect. Izv.Sekt.plat.i blag.met. no.28:
56-126 '54. (MLRA 7:9)
(Compounds, Complex) (Platinum)

Tronev, V. G.

USSR/Chemistry - Synthesis

Card 1/1 Pub. 22 - 27/49

Authors : Tronev, V. G., and Shumilina, M. E.

Title : Synthesis of Pt-hexaammoniates at increased ammonia pressure

Periodical : Dok. AN SSSR 101/3. 499-501, Mar 21, 1955

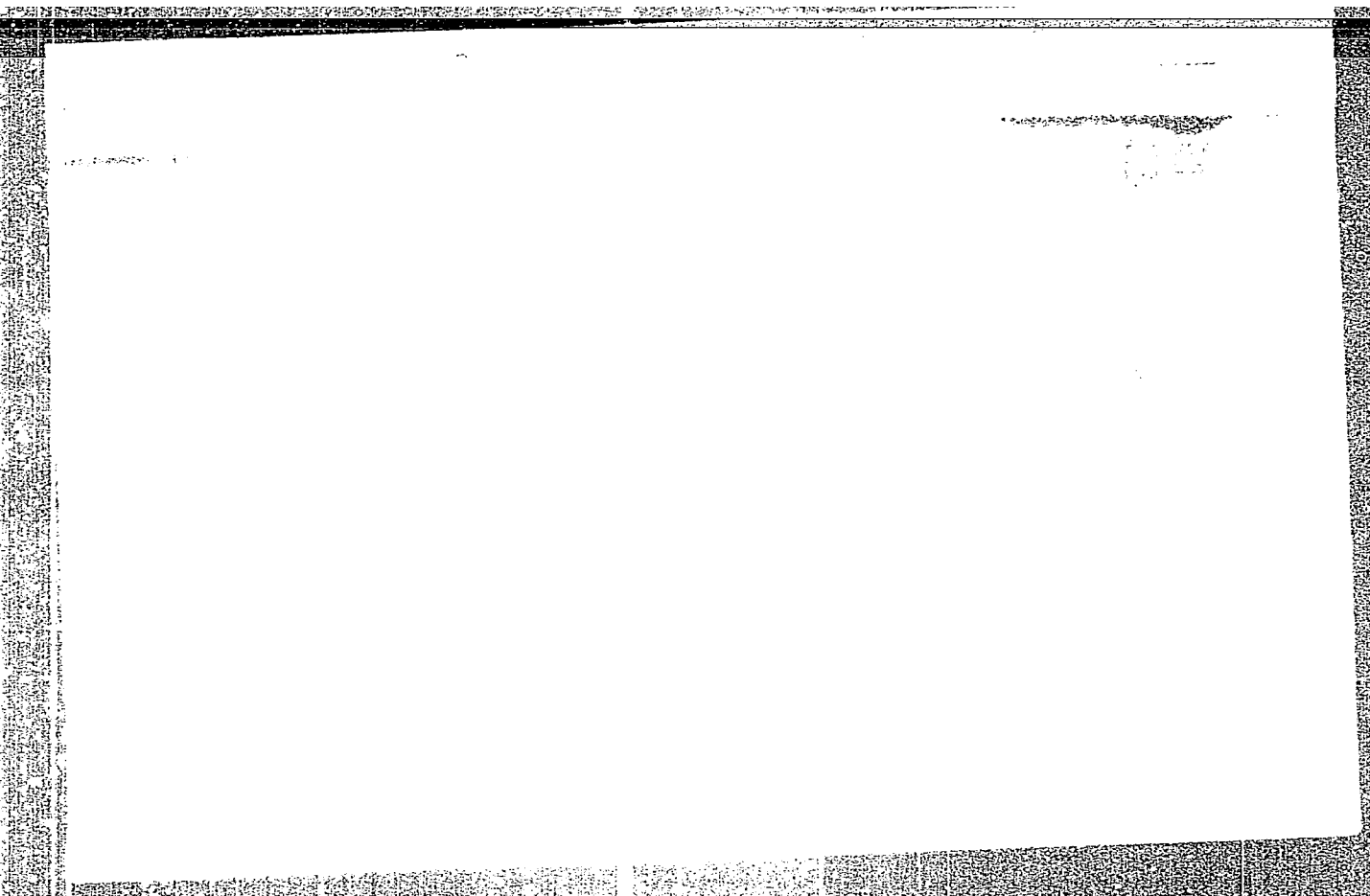
Abstract : The synthesis of Pt-hexaammoniates with the aid of increased pressure of gaseous ammonia is described. The difficulties involved in the conversion of pentaamines into hexamines are explained by the weak trans-effect of the ammonia. The use of methylamine and other similar solvents for the displacement of the Cl-atom in aqueous ammonia solutions is recommended for the purpose of obtaining better results. Six references: 4 USSR, 1 USA and 1 German (1882-1952).

Institution : Acad. of Sc., USSR, The N. S. Kurnakov Inst. of Gen. and Inorg. Chem.

Presented by : Academician I. I. Chernyaev, October 14, 1954

"APPROVED FOR RELEASE: 03/14/2001

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APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001756720012-0"

TRONEV, V. G.

USSR/Inorganic Chemistry. Complex Compounds

C

Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26436
Author : Tronev, V.G., Chibireva, M.Ye.
Inst :
Title : Volatility of Germanium in Flow of Gases.
Orig Pub : Zh. neorgan. khimii, 1956, 1, No. 10,
2278 - 2282.

Abstract : It is shown that powdered Ge is sublimated to 94 - 95% at 800 to 850° in a flow of N₂ containing 1% of O₂, or in a flow of Ar containing 0.25% of N₂ and 0.03% of O₂. The sublimate contains 78% of Ge and up to 5% of N. The x-ray photograph of the sublimate indicates the presence of lines corresponding to a mixture of metallic Ge and GeO₂.

Card 1/1

FRONEV, V.G., KOCHETKOVA, A.P.

Synthesis and thermographic study of some complex compounds of
indium. Khim.redk.elem. no.3:87-99 '57. (MLBA 10:8)
(Indium)

TRONEV V.G.
KOCHETKOVA, A.P.; TRONEV, V.G.

Heat resistance of amino compounds of gallium, indium, and thallium.
Zhur.neorg.khim. 2 no.9:2043-2048 S '57. (MIRA 10:12)
(Gallium) (Indium) (Thallium) (Amino compounds)

TRONEV, V.G.; GRIGOROVICH, A.N.

Composition and thermal stability of some ammoniates and amino
compounds of selenium and tellurium tetrachlorides. Zhur. neorg.
khim. 2 10:2400-2405 0 '57. (MIRA 11:3)
(Ammines) (Selenium chloride) (Tellurium chloride)

78-3-4-30/38

AUTHORS: Kotel'nikova, A. S., Tronev, V. G.

TITLE: Investigation of the Complex Compounds of Bivalent Rhenium
(Issledovaniye kompleksnykh soyedineniy dvukhvalentnogo reniya)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 4, pp. 1008-1027
(USSR)

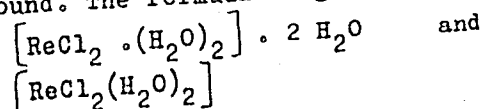
ABSTRACT: The Complex compounds of rhenium-II were produced and investigated. From the experimental material follows: that by the reduction of KReO_4 in concentrated hydrochloric acid solution with gaseous hydrogen and under a pressure of from 100 - 110 atmospheric excess pressure and at 300°C solutions can be produced in which rhenium exists in a bivalent form. From the hydrochloric acid solutions of rhenium-II with acetone solution the following products were isolated by crystallization: $\text{ReCl}_2 \cdot 4\text{H}_2\text{O}$ and $\text{H}_2\text{ReCl}_4 \cdot 2\text{H}_2\text{O}$. Thermographic analyses were carried out with these compounds. $\text{ReCl}_2 \cdot 4\text{H}_2\text{O}$ has two endothermal effects at 150°C and 398°C . $\text{H}_2\text{ReCl}_4 \cdot 2\text{H}_2\text{O}$ loses water at 150°C and with a further rise

Card 1/4

78-3-4-30/38

Investigation of the Complex Compounds of Bivalent Rhenium

of temperature it decomposes forming oxidation products.
 $\text{ReCl}_2 \cdot 4 \text{H}_2\text{O}$ on heating to 150°C also loses 2 mol water
 forming $\text{ReCl}_2 \cdot 2 \text{H}_2\text{O}$. In these two compounds the water can,
 based on the experimental results, be regarded as coordi-
 natively bound. The formula is given as follows:



$\text{H}_2\text{ReCl}_2 \cdot 2 \text{H}_2\text{O}$ undergoes some intermediate compounds with
 the beginning of hydrolysis; these intermediate compounds
 were also isolated in solid form: $\text{H}_2[\text{Re}(\text{OH})_3\text{Cl}]$, $\text{H}_2[\text{Re}(\text{OH})_4]$.

$\text{ReCl}_2 \cdot 4 \text{H}_2\text{O}$ and $\text{ReCl}_2 \cdot 2 \text{H}_2\text{O}$.

Also some acidous salts were isolated in solid form: KReCl_4 ,
 $\cdot \text{H}_2\text{O}$, KReCl_4 , $\text{NH}_4\text{HReCl}_4 \cdot \text{H}_2\text{O}$ and $\text{NH}_4\text{HReCl}_4$, $(\text{PyH})\text{HReCl}_4$.

In the treatment of $\text{H}_2\text{ReCl}_2 \cdot 2 \text{H}_2\text{O}$ PyH HReCl_4 forms with
 pyridine in acidous medium. This compound can easily be con-
 verted into $[\text{ReO}_2\text{Py}_4]\text{Cl}$ in the evaporation in air, Re-III
 transforming into Re-V on this occasion.

For the purpose of separating bivalent rhenium from rhenium

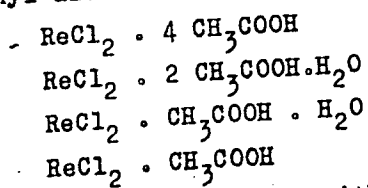
Card 2/4

78-3-4-30/38.

Investigation of the Complex Compounds of Bivalent Rhenium

compounds of other valence the extraction method from aqueous hydrochloric solutions with organic solvents was used. In this it was found that the best extraction of Re^{2+} can be carried out with such organic solvents in which C=O occurs; e.g. pinacoline, acetophenone, methylacrylate, dimethylphthalate and others.

Some bivalent rhenium compounds were isolated with methyl alcohol. In the reaction of $\text{H}_2\text{ReCl}_4 \cdot 2\text{H}_2\text{O}$ in glacial acetic acid solution the following compounds form on addition of methyl alcohol:



On the action of $\text{ReCl}_2 \cdot \text{CH}_3\text{COH}$ with pyridine a solid substance of the following composition is formed: $\text{ReCl}_2 \cdot \text{CH}_3\text{COOH} \cdot \text{Py}$.

The thermographic investigations of the derivatives of

Card 3/4

78-3-4-30/38

Investigation of the Complex Compounds of Bivalent Rhenium

$H_2ReCl_4 \cdot 2H_2O$ and the acidous salts NH_4HReCl_4 and $(Py)HReCl_4$ showed⁴ that these compounds are thermally stable and decomposable only at $400 - 430^\circ C$. From the bivalent compounds of rhenium with acetic acid $ReCl_2 \cdot CH_3COOH$ shows the greatest stability on heat treatment. It decomposes at not less than $300^\circ C$. There are 9 figures, 11 tables, and 14 references, 8 of which are Soviet.

SUBMITTED: October 2, 1957

Card 4/4

AUTHOR: Tronev, V.G.

SOV/ 78-3-7-44/44

TITLE:

On the Investigations and Production of Rare Elements in the German Democratic Republic (Ob issledovanii i proizvodstve redkikh elementov v Germanskoy Demokraticheskoy Respublike)

PERIODICAL:

Zhurnal neorganicheskoy khimii. 1958, Vol. 3, Nr 7, pp 1717-1718 (USSR)

ABSTRACT:

In the German Democratic Republic much intensive research work is being carried out with respect to the working of mineral salts as well as within the field of the chemical technology of rare chemical elements, especially rubidium, cesium, germanium, selenium, tellurium, and rare earths.

Technological work with respect to the separation of cesium-rubidium from natural salts and concentrates was carried out. Investigations in connection with the production of rare earths from apatite concentrates with a rare earth content of 0.9% are carried out by basic precipitation, by means of which an enrichment of the rare earths of up to 96% is attained. Next, cerite and yttrium earths are separated efficaciously by the application of the method of ion exchange. Great interest was caused also by

Card 1/2

On the Investigations and Production of Rare Elements
in the German Democratic Republic

SOV/ 78-3-7-44/44

the working of selenium, tellurium, germanium, and especially rhenium, by means of complex compounds. A new technological operational scheme for the working of copper anode mud for the production of noble metals and large quantities of selenium was set up. The production of the purest type of selenium, germanium, and silicon, which are being widely used for the production of semi-conductors, is also described.

At present a special Institute of Applied Chemistry for the production of rare elements has been established in the German Democratic Republic.

1. Rare earth elements--Analysis
2. Rare earth elements--Production
3. Rare earths--Analysis
4. Rare earths--Production

Card 2/2

USCOMM-DC-55722

AUTHORS: Tronev, V. G., Lebedev, V. G. SOV/78-3-10-8/35

TITLE: The Synthesis of the Compounds of Germanium Tetrachloride With Some Nitrogenous Addenda (Sintez soydineniy tetrakhlorida germaniya s nekotorymi azotsoderzhashchimi addendami)

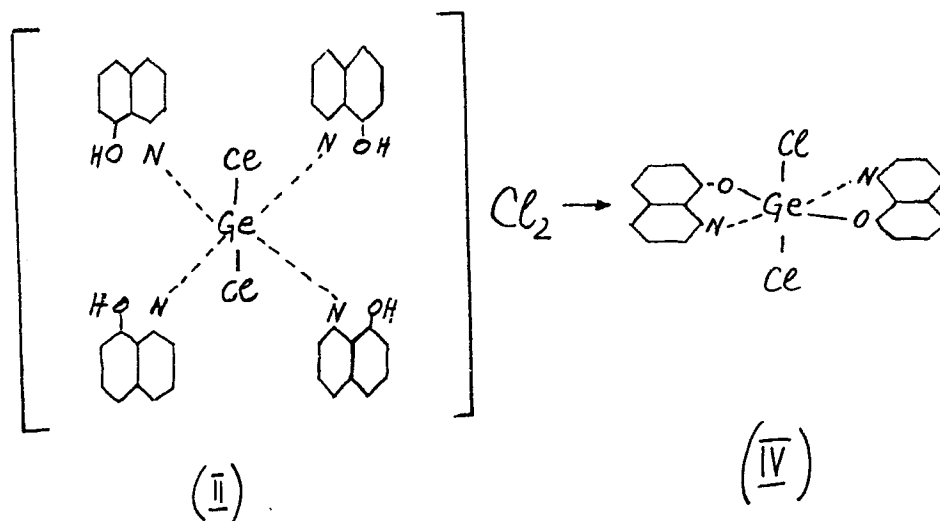
PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 10, pp 2272-2275 (USSR)

ABSTRACT: The synthesis of GeCl_4 with oxyquinoline, pyridine and ethylene diamine was carried out. The compounds have the following formulae:
 $\text{GeCl}_4 \cdot 4 \text{C}_2\text{H}_8\text{N}_2$ (I), $\text{GeCl}_4 \cdot 4 \text{C}_9\text{H}_7\text{NO}$ (II), $\text{GeCl}_4 \cdot 2 \text{C}_5\text{H}_5\text{N}$ (III).
 The compound $\text{GeCl}_2(\text{C}_9\text{H}_6\text{NO})_2$ (IV) is produced in the pyrolysis of the compound $\text{GeCl}_4 \cdot 4 \text{C}_9\text{H}_7\text{NO}$. The compound $\text{GeCl}_2(\text{C}_9\text{H}_6\text{NO})_2 \cdot 2\text{NH}_3$ (V) is produced in the interaction of $\text{GeCl}_2(\text{C}_9\text{H}_6\text{NO})_2$ with dry, gaseous ammonia at a temperature of 100°C .
 The coordination structure of the above-mentioned compounds was indicated:

Card 1/3

SOV/78-3-10-8/35

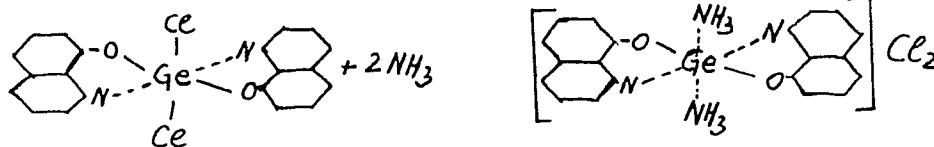
The Synthesis of the Compounds of Germanium Tetrachloride With Some Nitrogenous Addenda



Card 2/3

SOV/78-3-10-8/35

The Synthesis of the Compounds of Germanium Tetrachloride With Some Nitrogenous Addenda



There are 1 table and 7 references, 1 of which is Soviet.

SUBMITTED: May 16, 1958

Card 3/3

AUTHORS: Tronev, V. G., Babeshkina, G. K.

S07/78-3-10-9/35

TITLE: I. Chloro Rhenates of Ammonium, Pyridine, Aniline and Ethylene Diamine (I. Khlororenaty ammoniya, piridina, anilina i etilen-diamina)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 10, pp 2276-2280 (USSR)

ABSTRACT: In the present paper the synthesis and analysis of some properties, particularly of the thermal stability of the compounds $(\text{NH}_4)_2[\text{ReCl}_6]$, $(\text{PyH})_2[\text{ReCl}_6]$, $(\text{EnH}_2)[\text{ReCl}_6]$, $(\text{AnH})_2[\text{ReCl}_6]$, were carried out. The complex compounds of the A_2ReX_6 type were synthesized with ethylene diamine, pyridine and aniline. It was shown by the determination of electric conductivity and the exchange reactions that complexes with the anion $(\text{ReCl}_6)^{2-}$, combined with the respective amine ion, are produced in these solutions. These salts are regarded as amine salts of the hexachloro rhenic acid. The thermograms of $(\text{NH}_4)_2[\text{ReCl}_6]$, $\text{EnH}_2[\text{ReCl}_6]$, $(\text{AnH})_2[\text{ReCl}_6]$, $(\text{PyH})_2[\text{ReCl}_6]$ were taken. It follows from the thermograms that $(\text{NH}_4)_2[\text{ReCl}_6]$ reaches the highest degree of

Card 1/2

SOV/78-3-10-9/35

I. Chloro Rhenates of Ammonium, Pyridine, Aniline and Ethylene Diamine

thermal stability at 462°C. According to thermal stability, the complex compounds of quadrivalent rhenium are classified as follows: $(\text{NH}_4)_2[\text{ReCl}_6] > (\text{EnH}_2)[\text{ReCl}_6] > (\text{PyH})_2[\text{ReCl}_6] > (\text{AnH})_2[\text{ReCl}_6]$
up to 426° 376° 300° 294°

Metallic rhenium of highest purity is obtained in the thermal decomposition of ammonium chloro rhenate in the nitrogen current. Then it is completely free from oxygen compounds.

There are 6 figures and 15 references, 4 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences, USSR)

SUBMITTED: May 5, 1958

Card 2/2

AUTHORS: Tronev, V. G., Babeshkina, G. K. SOV/78-3-11-6/23

TITLE: II. Production and Properties of Rhenium Dipyrindine Tetra-
chloride (II. Polucheniye i svoystva dipiridintetrakhlorida
reniya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 11,
pp 2458 - 2461 (USSR)

ABSTRACT: A synthesis for the production of rhenium dipyrindine tetra-
chloride was investigated. $(\text{PyH})_2[(\text{ReCl}_6)]$ was used as
initial compound. The produced rhenium dipyrindine tetra-
chloride has the following composition:

%Re - 38,30
Cl - 29,16
N - 5,76

This analysis corresponds to the composition $[\text{RePy}_2\text{Cl}_4]$.

The homogeneity of the compound was confirmed by the
crystalloptic analysis. Several properties as well as the
thermal stability of the rhenium dipyrindine tetrachloride
were investigated. The determinations of the solubility,

Card 1/3

II. Production and Properties of Rhenium Dipyridine
Tetrachloride

SOV/78-3-11-6/23

electric conductivity, and magnetic properties showed that the compound $[\text{RePy}_2\text{Cl}_4]$ belongs to the group of the nonelectrolytes and is similar to the corresponding platinum-(IV), -cis, and trans compounds. No well defined products are produced in the case of an interaction between $[\text{RePy}_2\text{Cl}_4]$ and ammonia, nitrite, and oxalate, at room temperature and at higher temperature. In the case of an interaction between $[\text{RePy}_2\text{Cl}_4]$ and ethylene diamine in aqueous solution $[\text{ReO}_2\text{En}_2]\text{Cl}$ is produced. Rhenium is pentavalent in this compound and the latter is diamagnetic. The pentavalence of rhenium in this compound was confirmed by the method of Noddak. There are 2 figures and 8 references, 4 of which are Soviet.

Card 2/3

II. Production and Properties of Rhenium Dipyridine
Tetrachloride

SOV/78-3-11-6/23

* ASSOCIATION: Institut obshchey i neorganicheskoy khimii im.N.S.Kurnakova
Akademii nauk SSSR (Institute of General and Inorganic
Chemistry imeni N.S.Kurnakov, AS USSR)

SUBMITTED: May 5, 1958

Card 3/3

SOV/26-59-10-20/51

5(3)

AUTHOR: Tronev, V.G., Doctor of Chemical Sciences

TITLE: The Use of Gases at Elevated Pressure for the Synthesis of New Inorganic Compounds

PERIODICAL: Priroda, 1959, Nr 10, pp 89-91 (USSR)

ABSTRACT: Gases at elevated pressure are widely used in organic chemistry and technology. However, there are only a few samples of their use for the synthesis of inorganic compounds. Research work is carried out in the laboratory of high pressure annexed to the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the AS USSR. A.S. Kotel'nikova, G.K. Babeshkina and the author used hydrogen at elevated pressure to obtain metals of high purity or compounds of unusual valence. In the research work of A.N. Grigorovich and A.P. Kochetkova, ammonia is used to get water-soluble, but heat-resistant, complex compounds. The use of hydrogen at elevated pressure will originate new oxidizing reactions. According to information obtained from N.N. ✓

Card 1/2

SOV/26-59-10-20/51

The Use of Gases at Elevated Pressure for the Synthesis of New Inorganic Compounds

Semenov, the possibility of producing active atoms of hydrogen is not very likely at normal temperature and pressure conditions. In cooperation with V.N. Chulkov and A.L. Khrenova, the authors have found that under pressure the reactions of sulphur, selenium and liquid ammonia on hydrogen will take an accelerated course at room temperature. For this purpose, a laboratory autoclave with a magnetic mixer and a device for recording the heat effects on the Kurnakov pyrometer is used (Figure 1). There is 1 photograph and 1 graph.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova Akademii nauk SSSR/Moskva (Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the AS USSR/Moscow) ✓

Card 2/2

5. (2)

AUTHORS:

Miao Ching-sheng, Tronev, V. G.

SOV/78-4-8-11/43

TITLE:

On the Composition and the Thermal Stability of the Acido-complex Compounds of Re^{III} (O sostave i termicheskoy ustoychivosti atsidokompleksnykh soyedineniy Re^{III})

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 8, pp 1768 - 1774 (USSR)

ABSTRACT:

Hitherto trivalent rhenium has been assumed (Refs 1-5) to form acido complex compounds with the coordination number 4 or 6: $\text{Me}^{\text{I}}[\text{ReCl}_4]$ and $\text{Me}^{\text{I}}[\text{ReCl}_6]$; respectively. No publication data are available on the transformation of Re^{III} -compounds with the coordination number 4 into compounds with the coordination number 6. Experiments carried out by the authors to obtain $\text{Me}^{\text{I}}[\text{ReCl}_6]$ according to the methods described in publications failed. The authors report on the composition, properties and thermal stability of NH_4ReCl_4 , RbReCl_4 , and CsReCl_4 . The rhenium metal serving as initial material was produced from ammonium

Card 1/3

On the Composition and the Thermal Stability of the SOV/78-4-8-11/43
Acido-complex Compounds of Re^{III}

perrhenate by reduction with hydrogen in the autoclave; it was then chlorinated with chlorine gas and the obtained ReCl_5 was decomposed in nitrogen into ReCl_3 . The analysis of the hydrochloric solution of ReCl_3 is given in table 1. By the addition of RbCl or CsCl the corresponding complex salts were obtained. The production of KReCl_4 could not be carried out as is mentioned in reference 12. The authors obtained, however, NH_4ReCl_4 . Table 2 shows the analysis of these complex salts. The ammonium salt is similar to the salts RbReCl_4 and CsReCl_4 already known with respect to its crystal form, (Fig 1), diamagnetism, and thermal stability. The determination results of magnetic susceptibility are given in table 3. The absolute values agree with those of reference 12, however, not their signs. Compound Me_3ReCl_6 could not be produced from compound MeReCl_4 . The effect of concentrated hydrochloric acid in the autoclave under nitrogen and hydrogen pressure led at 250° to the disproportion-

Card 2/3

On the Composition and the Thermal Stability of the SOV/78-4-8-11/43
Acido-complex Compounds of Re^{III}

ation of the MeReCl_4 compounds (Tables 4,5) according to reference 10 according to the scheme $9\text{Re}^{\text{III}} \rightarrow 6\text{Re}^{\text{II}} + 2\text{Re}^{\text{IV}} + \text{Re}^{\text{VII}}$. Also the reduction of the perrhenates with iodides in hydrochloric solution yielded only Re^{IV} compounds (Tables 6,7). Figures 2-6 show the thermograms of NH_4^- , Rb- and Cs- ReCl_4 salts as well as of ReCl_3 and $(\text{NH}_4)_2\text{ReCl}_6$. The heating of MeReCl_4 in dry nitrogen leads to the decomposition into ReCl_3 , metallic rhenium and Me_2ReCl_6 . The thermal stability decreases with the increasing radius of the cation (Table 8). There are 6 figures, 8 tables, and 13 references, 4 of which are Soviet.

SUBMITTED: July 11, 1958

Card 3/3

SOV/78-4-8-39/43

5(2)

AUTHORS:

Tronev, V. G., Belyakov, I. M.

TITLE:

Experiments of Synthesizing Selenamine Compounds by Oxidation of Selenium by Oxygen Under Pressure in the Presence of Liquid Ammonia (Opyty sinteza selenaminovykh soyedineniy oksleniya selena kislorodom pod davleniyem v prisutstvi zhidkogo ammiaka)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol. 4, Nr. 8, pp. 1932-1935 (USSR)

ABSTRACT:

In a previous publication (Ref 1) it was pointed to the possibility of obtaining sulphamine compounds by oxidation of elementary sulphur by means of oxygen under pressure in the presence of liquid ammonia. It could be assumed that selenium would react in similar way. The existence and the composition of selenamine compounds has hitherto not been explained. Elementary selenium was heated in an autoclave with liquid ammonia under an oxygen pressure from 100 at to 50 to 100° during 5 to 6 hours. After the removal of the gases which had not entered the reaction the mixture of selenium and oxidation products was extracted by means of an ammonia solution, liquid

Card 1/2

SOV/78-4-8-39/43

Experiments of Synthesizing Selenamine Compounds by Oxidation of Selenium
by Oxygen Under Pressure in the Presence of Liquid Ammonia

ammonia or organic solvents. The extraction was rendered difficult by the easily soluble ammonium nitrate which had formed. From the analyses and the thermograms (Fig 1) conclusions are drawn to the formation of a compound of the form $\text{NH}(\text{SeO}_3\text{NH}_4)_2$. Moreover, a red explosive formed, probably selenium nitride. There are 2 figures and 6 references, 3 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova
Akademii nauk SSSR (Institute of General and Inorganic
Chemistry imeni N. S. Kurnakov of the Academy of Sciences,
USSR)

SUBMITTED: March 10, 1959

Card 2/2

MYAO TSIN-SHEN, TRONEV, V.G.

Synthesis and thermal decompositions of the tetraammine and
amino complex compounds of rhenium trichloride. Zhur. neorg.
khim. 5 no.4:861-869 Ap '60. (MIRA 13:7)
(Rhenium compounds)

TRONEV, V.G.; BEKHTLE, G.A.; DAVIDYANTS, S.B.

Chlorination of rhenium sulfide with gaseous chlorins. Trudy AN
Tadzh. SSR 84:105-119 '59. (MIRA 13:3)
(Rhenium sulfide) (Chlorination)

TRONEV, V.G.; BEKHTLE, G.A.; DAVIDYANTS, S.B.

Chlorination of rhenium sulfide with a mixture of chlorine and oxygen.
Trudy AN Tadzh. SSR 84:121-127 '59. (MIRA 13:3)
(Rhenium sulfide) (Chlorination)

TRONEV, V .G.; BASITOVA, S.M.; BEKHTE, G.A.; DAVIDYANTS, S.B.

Behavior of rhenium during the chlorination of molybdenite.
Trudy AN Tadzh. SSR 84:129-136 '59. (MIRA 13:3)
(Rhenium) (Molybdenite) (Chlorination)

ROTKOVA, S.V., starshiy bibliograf; METSATUN'YAN, I.A., bibliograf;
TANANAYEV, I.V., akademik, otv.red.; TRONEV, V.G., doktor khim.
nauk, nauchnyy red.; SPIVAKOVA, E.M., red.; PEREL'MAN, F.M.,
doktor khim.nauk, nauchnyy red.; SPERANSKAYA, Ye.I., kand.khim.
nauk, nauchnyy red.; DEYCHMAN, E.N., kand.khim.nauk, nauchnyy red.;
BASHILOVA, N.I., mladshiy nauchn.sotrudnik, nauchnyy red.; BOL'SHA-
KOVA, N.K., mladshiy nauchn.sotrudnik, nauchnyy red.; KASHINA, R.S.,
tekhn.red.

[Chemistry of rare elements; bibliographic index of Soviet and
foreign literature] Khimiia redkikh elementov; bibliograficheskii
ukazatel' otechestvennoi i zarubezhnoi literatury. Moskva, Izd-vo
Akad.nauk SSSR. No.1. (1951-1954). 1960. 418 p.

(MIRA 13:11)

1. Biblioteka Otdeleniya khimicheskikh nauk AN SSSR (for Rotkova).
2. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
(for Tronev, Perel'man, Speranskaya, Deychman, Bashilova, Bol'shakova).
(Bibliography--Metals, Rare and minor)

5.2620
AUTHORS:

Myao Tsin-shen, Tronev, V. G.

69020

S/078/60/005/04/015/040
B004/B007

TITLE:

The Synthesis and Thermal Decomposition
of Tetraammoniacate and the Amino Complex Compounds of Rhenium
Trichloride

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 4, pp 861 - 869
(USSR)

ABSTRACT:

The present paper was intended to provide an answer to the question as to whether complex ammino compounds of Re(III) with the coordinate number 6 exist, or whether these compounds have the coordinate number 4. In order to avoid hydrolysis, the synthesis of the ammino compounds of Re(III) was carried out with dry ReCl_3 and anhydrous NH_3 or anhydrous amines. In this way $[\text{Re}(\text{NH}_3)_4]\text{Cl}_3$ was obtained, and by precipitation with AgNO_3 it was proved that all three chlorine atoms react in the same manner and are therefore not in the inner sphere of the complex. Further, the synthesis of $\text{ReCl}_3 \cdot 4\text{C}_2\text{H}_5\text{NH}_2$, $\text{ReCl}_3 \cdot 4(\text{C}_2\text{H}_5)_2\text{NH}$, $\text{ReCl}_3 \cdot 3\text{Py} \cdot \text{H}_2\text{O}$ (Py = pyridine), $\text{ReCl}_3 \cdot 4\text{Py}$, and of the double salt $[\text{RePy}_4][\text{ReCl}_3\text{OH}]_3$ was described. Figures 1 - 5 and tables 1 - 6

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The Synthesis and Thermal Decomposition of Tetra-ammoniacate and the Amino Complex Compounds of Rhenium Trichloride

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8/078/60/005/04/015/040
B004/B007

give the experimental data on the thermal decomposition of these compounds (heating curves and analyses). With respect to their thermal stability, the compounds may be arranged in the following order: $\text{ReCl}_3 \cdot 4\text{NH}_3$ (beginning of decomposition at 345°) >

> $\text{ReCl}_3 \cdot 4\text{C}_2\text{H}_5\text{NH}_2$ (320°) > $\text{ReCl}_3 \cdot 4(\text{C}_2\text{H}_5)_2\text{NH}$ (268°) > $\text{ReCl}_3 \cdot 4\text{Py}$ (260°).

During heating or washing with liquid ammonia, ammonolysis occurs with $\text{ReCl}_3 \cdot 4\text{NH}_3$, accompanied by formation of the amido compounds

$\text{Re}(\text{NH}_3)_2(\text{NH}_2)_2\text{Cl}$ and $\text{Re}(\text{NH}_3)(\text{NH}_2)_3\text{Cl}$, in which the Re-N-bond remains stable up to 500° . There are 5 figures, 6 tables, and 6 references, 4 of which are Soviet.

SUBMITTED: April 22, 1959

Card 2/2

5.2620

1209, 1273, 1282

86490
S/078/60/005/008/023/031/XX
B023/B066

AUTHORS: Lebedev, V. G. Tronev, V. G.

TITLE: Complex Compounds of Germanium Halides With Pyridine,
2,2'-Dipyridyl, and 1,10-Phenanthroline

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 8,
pp. 1725-1729

TEXT: The authors studied germanium tetrahalide compounds with hetero-
cyclic amines, viz., pyridine, 2,2'-dipyridyl, and 1,10-phenanthroline.
The amino compounds were synthesized as follows: To dissolve the organic
amine in anhydrous CCl_4 (concentration ~ 0.05 mole), such an amount of
germanium halide solution (in the same solvent) was added that the ratio
of amine : metal was 1.2-1.3 for 1,10-phenanthroline, 1.2-1.3 for
2,2'-dipyridyl, and 2.4-2.5 for pyridine. The mixture was caused to
boil for 1/2 hour under dry conditions. It was then cooled down, and
sucked off on a porous glass filter. The precipitate was washed out on the
filter with dry CCl_4 , then with a small amount of absolute benzene and

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Complex Compounds of Germanium Halides With Pyridine, 2,2'-Dipyridyl, and 1,10-Phenanthroline

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S/078/60/005/008/023/031/XX
B023/B066

sulfuric ether. The rest of the solvent was put into a vacuum at normal temperature. The solid phase was brought to a constant weight. The yield was 90% referred to germanium, 80% to pyridine, and less to bromides. The resultant substances form white, finely crystalline powders which are hydrolyzable in humid air. These complex compounds might belong to the coordination compounds of the $\text{GeH}_4 \cdot 2\text{A}$ type (H - halogen Cl or Br, A - pyridine, 1/2'-dipyridyl, 1/2 1.10-phenanthroline). The authors further determined the molecular weight of the complex chlorides (Table 2) which proved to be monomeric. The system GeCl_4 -phenanthroline was studied in chloroform solution by the optical method. The formation of a $\text{GeCl}_4 \cdot \text{C}_{12}\text{H}_8\text{N}_2$ compound was also consistent with the analytical data. The thermal stability was studied with Kurnakov's pyrometer. The heating curves of these substances usually show one or two endothermic effects (Fig. 3, Table 3). A regular change of the thermal stability of GeCl_4 and GeBr_4 compounds with amines was observed. A. O. Alekseyeva and Chugayev are mentioned. There are 3 figures, 3 tables, and 9 references: 5 Soviet,

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86490

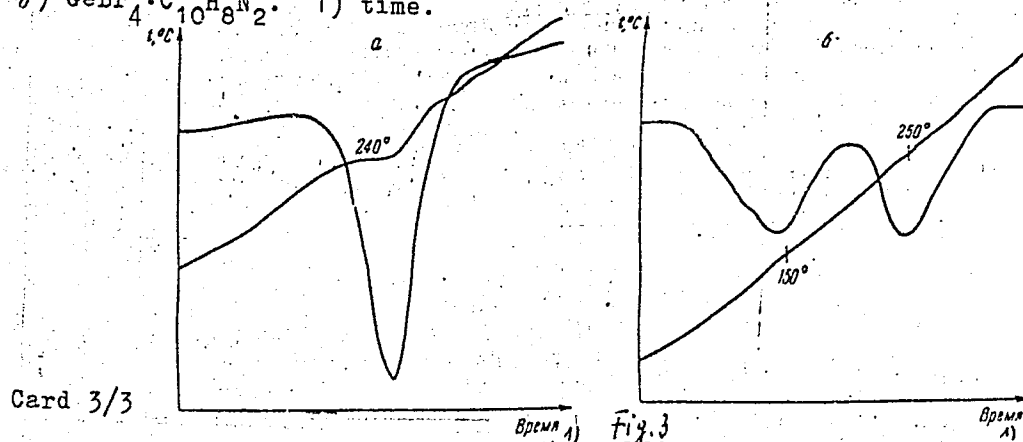
Complex Compounds of Germanium Halides With
Pyridine, 2,2'-Dipyridyl, and 1,10-Phenanthro-
line

S/078/60/005/008/023/031/XX
B023/B066

2 British, and 2 German.

SUBMITTED: July 15, 1959

Legend to Fig. 3: Thermograms of the compounds: a) $\text{GeCl}_4 \cdot \text{C}_{10}\text{H}_8\text{N}_2$
b) $\text{GeBr}_4 \cdot \text{C}_{10}\text{H}_8\text{N}_2$. 1) time.



Card 3/3

Время л) Fig. 3

Время л)

LEBEDEV, V.G.; TRONEV, V.G.

Compounds of germanium halides with o-hydroxyquinoline. Zhur.
neorg. khim. 5 no. 12:2849-2850 D '60. (MIRA 13:12)
(Germanium compounds) (Quinolinol)

TRONEV, V.G.; KULIKOVSKIY, B.N.

Products of the Te oxidation by oxygen under pressure in water
and aqueous solutions of NaOH. Zhur.neorg.khim..7 no.9:2278-2280
S '62. (MIRA 15:9)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova
AN SSSR.

(Tellurium oxide)

BABUSHKINA, G.K.; TRONEV, V.G.

Synthesis and investigation of rhenium (IV) aminohalides.
Production and properties of rhenium dipyridinetetrabromide.
Dokl. AN SSSR 142 no.2:344-346 Ja '62. (MIRA 15:2)

1. Institut obshchey i neorganicheskoy khimii im. N.S.
Kurnakova AN SSSR. Predstavleno akademikom I.I.Chernyayevym.
(Rhenium compounds)

S/020/62/147/005/018/032
B117/B186

Complex indium compounds of lowest ...

$\text{InI} \cdot \text{NH}_3$ to $120 - 150^\circ\text{C}$ and of $\text{InBr} \cdot \text{NH}_3$ to 145°C causes their simultaneous dissociation into InM and NH_3 and disproportionation into 2In_{met} and the corresponding $\text{InM} \cdot 5\text{NH}_3$. Exothermic effects observed at $60 - 70^\circ\text{C}$ and $40 - 50^\circ\text{C}$ indicated transition into the more stable crystalline form of the compounds studied, since the composition and properties remained unchanged. When the pressure is increased to 6-8 atm, or if liquid NH_3 is used, disproportionation yields grayish black $\text{InM} \cdot 2\text{NH}_3$ products.

$\text{InM}_3 \cdot \text{NH}_3$ were synthesized under the same conditions and studied thermographically to prove the composition of these products. Thus, trihalides yield $\text{InM}_3 \cdot 6\text{NH}_3$. Thermograms showed the decomposition of these products down to $\text{InM}_3 \cdot \text{NH}_3$, and fusion of metallic In. The presence of In_{met} in this reaction was also proved by X-ray analysis. The reaction of In_{met} with NH_3 sets in at the melting point of indium and shifts to the right in the thermogram at higher temperatures. The last exothermic effects at

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Complex indium compounds of lowest ...

S/020/62/147/005/018/032
B117/B186

345 and 270°C correspond to the fusion of monohalides containing small amounts of In and ammoniates of In III, which do not take part in the reaction. Conclusion: The reaction of InM with NH_3 causes either addition or disproportionation, according to the conditions. The only products are monoammoniates and diammoniates. Compounds containing a larger number of NH_3 molecules were not obtained owing to disproportionation of In I into In_{met} and In III at higher ammonia pressures. There are 2 figures and 1 table. ✓

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N.S. Kurnakov of the Academy of Sciences USSR)

PRESENTED: July 16, 1962, by I.I. Chernyayev, Academician

SUBMITTED: July 4, 1962

Card 3/3

44541
S/020/62/147/006/022/034
B144/B101

57120
AUTHORS: Kochetkova, A. P., Tronev, V. G., Gilyarov, O. N.
TITLE: Complex low-valency indium compounds. Synthesis and study of the properties of indium dihalide amines
PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 6, 1962, 1373-1375

TEXT: Complex compounds having 6 NH_3 molecules (room temperature) and 8 NH_3 molecules (slightly below 0°C) are formed from In_2I_4 and In_2Br_4 molecules with gaseous NH_3 at a pressure of 3-4 atm by a synthesis method described earlier (DAN, 147, no.5 (1962)). These compounds disproportionate already when synthesizing: $\text{In}_2\text{Hal}_4 \cdot 6\text{NH}_3 + 2\text{NH}_3 = \text{InHal} \cdot 2\text{NH}_3 + \text{InHal}_3 \cdot 6\text{NH}_3$, or when heated to $60 - 85^\circ\text{C}$ in an inert atmosphere with the separation of 2 NH_3 molecules from the complex compound having 8 NH_3 molecules, and with formation of $\text{In}_2\text{Hal}_4 \cdot 6\text{NH}_3$. Further

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Complex low-valency indium compounds ...

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conversion is different in iodides and bromides: $\text{In}_2\text{I}_4 \cdot 6\text{NH}_3$

= $\text{InI} + \text{InI}_3 \cdot 5\text{NH}_3 + \text{NH}_3$ with an exothermic effect at 120°C ;

$\text{In}_2\text{Br}_4 \cdot 6\text{NH}_3 = \text{InBr} \cdot \text{NH}_3 + \text{InBr}_3 \cdot 5\text{NH}_3$ with an exothermic effect at 85°C .

Ammine compounds of trivalent In decompose and react with InHal yielding dihalides as final products. Under exposure to air or water, metallic indium is formed. Complex compounds containing 6 and 8 NH_3 molecules are

stable in an inert medium. These results, justify assuming a dimer structure with a metal - metal bond, in which In is tetravalent. On disproportionation the binding electron pair is shifted toward an In atom. The kind of amine determines the bond strength and thus also the tendency to disproportionate. This will make it possible to determine the valency of indium in complex compounds with the formal valency of 2. There are 1 figure and 1 table.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova
(Institute of General and Inorganic Chemistry imeni
N.S. Kurnakov)

Card 2/3

Complex low-valency indium compounds ...

S/020/62/147/006/022/034
B144/B101

PRESENTED: July 16, 1962, by I. I. Chernyayev, Academician

SUBMITTED: July 4, 1962

+

Card 3/3

SPIVAKOVA, E.M.; TANANAYEV, I.V., akademik, otv. red.; TRONEV,
V.G., doktor khim. nauk, zam. otv. red.; KASHINA, P.S.,
tekhn. red.

[Chemistry of the rare elements; a bibliographic index of
Soviet and foreign literature] Khimiia redkikh elementov;
bibliograficheskii ukazatel' otechestvennoi i zarubezhnoi
literatury. Moskva, Izd-vo AN SSSR. No.2. (1955-1956).
1963. 354 p. (MIRA 17:2)

1. Glavnyy bibliograf Biblioteki Otdeleniya khimicheskikh
nauk AN SSSR (for Spivakova).

45461
S/078/63/008/003/019/020
B117/B186

5.3700

AUTHORS: Kochetkova, A. P., Tronev, V. G., Gilyarov, O. N.

TITLE: Compounds of indium with glycine

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 8, no. 3, 1963, 772-774

TEXT: Glycine compounds of indium with the formula $\text{In}(\text{Gly})_{3-n}\text{Cl}_n$ ($n = 0, 1, 2, 3$) and of the compositions $\text{In}(\text{Gly})_3\text{Cl}_3$, $\text{In}(\text{Gly})_2\text{GlyCl}_2$, and InGly_3 were synthesized by the method described for gallium (Zh. neorgan. khimii, 6, 1583 (1961)) and investigated. Their structure is similar to that of the corresponding gallium compounds and their heat resistance also increases analogously due to ring formation. Decomposition of $\text{In}(\text{Gly})_3\text{Cl}_3$ starts below the melting point of glycine (255°C) at 160°C . Decomposition of $\text{In}(\text{Gly})_2\text{GlyCl}_2$ occurs at $255-265^\circ\text{C}$, and that of InGly_3 only at 285°C . Indium-nitrogen bonds are unstable in triglycinate and triglycino chlorides subjected to the action of gaseous ammonia under

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Compounds of indium with glycine

S/078/63/008/003/019/020
B117/B186

pressure. In this respect, they differ from the corresponding gallium compounds. There is 1 figure.

SUBMITTED: August 16, 1962

Card 2/2

KULIKOVSKIY, B.N.; MIKHAYLOV, Yu.N.; TRONEV, V.G.

Products of the oxidation of Te by oxygen under pressure in aqueous solutions of KOH. Zhur.neorg.khim. 8 no.9:2088-2092 S '63.
(MIRA 16:10)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova
AN SSSR.

BABESHKINA, G.K.; TRONEV, V.G.

Synthesis and certain properties of pyridinium
pyridinepentahalorhenates (IV); $\text{PyH}[\text{RePyCl}_5]$ and $\text{PyH}[\text{RePyBr}_5]$.
Dokl. AN SSSR 152 no.1:100-101 S '63. (MIRA 16:9)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
AN SSSR. Predstavleno akademikom I.I.Chernyayevym.
(Pyridinium compounds) (Rhenium compounds) (Pyridine)

SPIVAKOVA, E.M.,; BABAYAN, I.A.; TANANAYEV, I.V., akademik, otv.
red.; TRONEV, V.G., doktor khim. nauk, zam. otv. red.;
DOROKHINA, I.N., tekhn. red.

[Chemistry of rare elements; a bibliographic index of Soviet
and foreign literature] Khimiia redkikh elementov; bibliogra-
ficheski ukazatel' otechestvennoi i zarubezhnoi literatury.
Moskva. Izd-vo "Nauka," No.3. Ge, Zr, Hf, Ta, Se, Te, Re.
(1955-1956). 1964. 261 p. (MIRA 17:4)

1. Glavnyy bibliograf Biblioteki Otdeleniya khimicheskikh nauk
Akademii nauk SSSR (for Spivakova).

L 11588-66 EWT(m)/T/EWP(j)/EWP(t)/EWP(b) IJP(c) JD/JG/RM
 ACC NR: AP5028895 SOURCE CODE: UR/0316/65/000/004/0116/0118

AUTHOR: Tronev, V. G. (Deceased); Dovlyatshina, R. A.

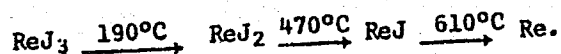
ORG: Institute of Chemistry, AN AzerbSSR (In-t khimii an AzerbSSR)

TITLE: Synthesis of rhenum triiodide and certain haloamines of rhenum

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 4, 1965, 116-118

TOPIC TAGS: rhenum, rhenum compound, complex compound, iodide, chloride, bromide, halide, *inorganic synthesis*

ABSTRACT: Rhenum triiodide was synthesized and reacted with ammonia to form a rhenum haloamine complex. A rhenum bromoamine complex was prepared by treating $RhBr_3$ with ammonia. The object was to study the properties and composition of rhenum haloamines. The ReJ_3 was prepared by heating ($325^\circ C$) a mixture of ReJ with an excess of iodine in a sealed evacuated ampoule. Thermal treatment of ReJ_3 produced the following transitions:



The $ReJ_3 \cdot 4NH_3$ was obtained by treating ReJ_3 with anhydrous gaseous ammonia at 5-6 atm for 5-6 hours at room temperature. The $ReBr_3 \cdot 4NH_3$ was prepared by treating a benzene

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L 11588-66

ACC NR: AP5028895

0
olution of ReBr_3 with an anhydrous gaseous ammonia for 6-7 hours at 6-7 atm at room temperature. The stability of Re^{III} -amines decreases in the order $\text{ReCl}_3 > \text{ReBr}_3 > \text{ReI}_3$. Orig. art. has: 2 figures, 1 table.

SUB CODE: 07/ SUBM DATE: 04Sep64/ ORIG REF: 001/ OTH REF: 002

HW

Card 2/2

TRONEV, V.G. [deceased]; DOVLYATSHINA, R.A.

Synthesis of rhenium triiodide and some rhenium halcammoniates.
Azerb.khim.zhur. no.4:116-118 '65.

(MIRA 18:12)

1. Institut khimii AN AzSSR. Submitted September 4, 1964.

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Complex compounds of rhenium (IV) with dipyridyl. Zhur.neorg.khiz.
10 no.11:2484-2492 N '65. (MIRA 18:12)

1. Submitted April 21, 1964.

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Double orthotellurates. Zhur.neorg.khim. 10 no.12: (MIRA 19:1)
2814-2817 D '65.

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AN SSSR.

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Preparation and properties of rhenium tribromide and
of some of its derivatives. Zhur. neorg. khim. 10 (MIRA 18:11)
no.1:303-305 Ja '65.

1. Submitted May 30, 1964.

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*On the Measurement of Fluidity and Viscosity of Metal Alloys. N. N. Kurnakov and M. J. Tronova (Compt. rend. (Doklady) Acad. Sci. U.R.S.S., 1946, 51, (5), 381-384).—[In English]. Fluidity depends on processes and changes taking place in the transition of a metal from the liquid to the solid state. It is not the same thing as the reciprocal of the viscosity in the molten state. Investigations of the fluidity of alloys in the systems iron-silicon (up to 60% silicon) and iron-phosphorus (up to 22% phosphorus) are described. The fluidity was determined in terms of the length of specimen obtained by pouring the alloys at 1500° C. on to a steel plate inclined at an angle of 4°. The results are correlated with the equilibrium diagrams, and it is shown that eutectic and certain intermetallic compounds correspond with maxima on the fluidity-composition diagram, while fluidity minima are observed for saturated solid solutions. Comparison with similar results for other systems suggests that the phenomena observed apply to all metal alloys. —G. V. R.

COMMON ELEMENTS

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KOCHETKOVA, A.P.; TRONEV, V.G.; GILYAROV, O.N.

Compounds of callium with glycine. Zhur. neorg. khim.
6 no.7:1582-1585 J1 '61. (MIRA 14:7)
(Callium compounds) (Glycine)

CA

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Investigation of the viscosity of alloys of iron and chromium in the range of ferrochrome. N. N. Kurnakov and M. Ya. Troneva. *Doklady Akad. Nauk S.S.S.R.* 57, 683-4 (1947); *Chem. Zentr.* (Russian Zone Ed.) 1948, II, 1161. Approx. detns. of the viscosity of Fe-Cr fusions were made by allowing the molten metal to flow down a trough at a fixed angle (cf. *C.A.* 40, 63889). Within the range of 25.65-65.49% Cr and at a pouring temp. of 1541-1675° a max. fluidity (or min. viscosity), as measured by the length of the cast piece, was observed at 29.50% Cr. This corresponds to the concn. at which the solidus and liquidus curves are practically coincident. At neighboring concns. dendrites are formed. This increases the viscosity.

M. G. Moore